UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,391	02/08/2000	Wei-Ping Sun	CISCO-1858	2543

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EXAMINER
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ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-8,10-17,37 and 39-48* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-8, 10-17, 37 and 39-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 6/10/05 has been entered.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

3.   Claims 1-4, 5-8, 10-17, 37, 39-48 rejected under 35 U.S.C. 112, first paragraph, as failing

to comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention. As claims 1, 16, 37, 41, 43, 46, the recitation " the request packet not

containing an unique identifier for the router card. In the specification, page 10, lines 1-6, the

request packet includes the port address of the router card" which is used to identify the router

card. Also, see claims 11, 12, 44, 47.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-4, 6-8, 10-17, 37 and 39-48 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hansen (US Pat. 6772204) in view of K. R. Sollings, (TFTP Protocol

(Revision 2) (hereinaher RFC 783), and Bailey et al. (US 6,185,623).

        Regarding claims 1, 16, 37, 41, 43 and 46, Hansen discloses a method and system for

downloading configuration file to a network device (Fig 1b, Ref 26) which couples to the

network management server. A network configuration tool "system controller" (Fig 1b, Ref 10,

28, 30 and 32) for receiving a request packet "Bootp packets" via network "bus" (col. 16, lines

13-26, Fig 1b, 29b) wherein the bootp request packet contains a destination address of a network

device that contain configuration tool and address of the network device that send a request

including code "file type" wherein the code contains port address (See col. 7, lines 40-52, PCI

slot read on port address), "the request packet not identified the unique identifier of the card such

Ethernet, X.25, Frame relay etc, and not includes a file name", the network configuration tool

examines the bootp packet based on the destination address and code and retrieving the file name

for transmitting to the network device via a reply message, then the network device send a new

request for downloading the file by using a trivial file transfer protocol (TFTP). The TFTP server

locates and opens this file based on the information provided in the TFTP request, then

downloads this boot file to the network device based on the protocol that uses to transmit the

packet "packet size" (See col. 16, lines 27-38 and col. 17, lines 8-38). However, Hansen fails to

discloses file size, the ack, duplicating ack, opcode, block number, checksum of packet, active

and inactive router. In the same field of endeavor, RFC 783 discloses a format for TFTP packets

that demonstrates a TFTP request packet containing a source port address and destination

address in the request packet and ack packet and transmitting or retransmitting the packets

contains the requested file between the devices (Pages 8-13). However, Hansen and RFC 783

fails to disclose a file size, master "active", slave "inactive" and determining the memory for

storing the file. In the same field of endeavor, Bailey discloses a system for booting a client

computer from a server that uses the TFTP. In this system the client may include a transfer size

request in the TFTP request packet, in which case the server responds to the request packet with

the transfer size (col. 4, line 58 - col. 5, line 36). The purpose of requesting the transfer size is to

determine the amount of memory needed to store a file (col. 11, lines 57-67). This constitutes

setting up a buffer size of at least as large as the file size. Bailey also discloses a subnet group of

clients wherein one client is the master client, representing the active router card of the present

invention, while any other clients in the group represent an inactive router cards (col. 6, lines 25-

40 and col. 7, lines 35-56).

Since, the references suggest the use TFTP for transferring the packet between the

devices. Therefore, it would have been obvious to one of ordinary skill in the art to apply a

method of send the file size and file names to the MC so that the network device would be able

to set aside enough memory to store the image file. One of ordinary skill in the art would have

been motivated to have a group of clients containing a master client in case the group of clients

all needed to download the same image file in order to use a common operating system as

disclosed by Bailey's system and method into RFC 783 which teaches a method and system for

transmitting a file between the device using TFTP into a method and system of Hansen. The

motivation would have been to prevent error during the configuration of the network device and

reduce the cost of device.

Regarding claims 2 and 17, Hansen discloses using trivial file transfer protocol (TFTP)

to make the request for the image file (Col. 17, lines 15-30). Hansen fails to expressly disclose

forming a data packet from the file, wherein the data packet is a fixed size and includes a system

frame header and a data packet protocol header. RFC 783 discloses that TFTP uses packets of

fixed length blocks (page 3). Figure 3-1; Order of Headers (page 5) shows a header structure

including Local Medium and Internet headers, which collectively represent the system frame

header of the present invention, and Datagram and TFTP headers, which represent the data

packet protocol header of the present invention. TFTP also specifies that each data packet must

be acknowledged by an acknowledgement packet before the next packet can be sent (page 3). At

the time the invention was made, it would have been obvious to a person of ordinary skill in the

art to use the fixed size TFTP packet format with the appropriate headers in sending data packets

formed from the requested file. One of ordinary skill in the art would have been motivated to do

this because this protocol is small and easy to implement for the purpose of transferring files.

Regarding claim 3, Hansen fails to disclose sending a last packet less than the fixed size.

RFC 783 discloses that a data packet of less than 512 bytes, which is the fixed size, signals

the termination of a transfer (page 3). At the time the invention was made, it would have been

obvious to a person of ordinary skill in the art to use this last packet smaller that 512 bytes at the

end of the file transfer as disclosed by RFC 783 into Hansen's system. One of ordinary skill in

the art would have been motivated to do this to reduce the processing time at the receiving node.

Regarding claim 4, Hansen fails to disclose retransmitting a data packet to the client if

the server receives a duplicate acknowledgment packet for the previous packet. RFC 783

discloses that a lost data packet causes a timeout for the intended recipient, in which case the

intended recipient retransmits its last packet (page 3). Thus, if the intended recipient is the client

and a timeout condition occurs, the client would then send an acknowledgement packet for the

previously received data packet, i.e. a duplicate acknowledgment. At the time the invention was

made, it would have been obvious to a person of ordinary skill in the art to retransmit a data

packet formed from the image file in response to receiving a duplicate acknowledgement packet.

One of ordinary skill in the art would have been motivated to do this in order to signal the server

that a data packet has not been received and needs to be retransmitted and reducing the

congestion at the network.

Regarding claims 6, 40, 45 and 48, Hansen does not expressly disclose a system frame

header and a data packet protocol header consisting essentially of an operation code, a block

number, a file type and a checksum. RFC 783 discloses a header structure in Figure 3-1; Order

of Headers (page 5) of Local Medium and Internet headers, which represent the system frame

header of the present invention, and the Datagram and TFTP headers represent the data packet

protocol header of the present invention. The format for a data packet includes an opcode and a

block # (see Figure 5-2, page 10). Additionally, TFTP specifies that it may be implemented on

top of the Internet User Datagram Protocol (UDP or Datagram) (page 2). The User Datagram

Header includes a checksum (page 15). Thus, this checksum would be included in the data

packet protocol header. RFC 783 also specifies that a request (RRQ) packet includes a filename

in the header. It would have been obvious to a person of ordinary skill in the art to use a system

frame header and the data packet protocol header format of a TFTP data packet in sending data

packets and include opcode, block number, check sum, in the header of the data packet as

disclosed by RFC 783 into the system of Hansen.

Regarding claim 7, Hansen fails to disclose that the acknowledgement packet consists

essentially of a system frame header, and acknowledgement code, and a block number. RFC 783

discloses a format for an ACK packet that contains an opcode, which represents the

acknowledgement code, and block # (see Figure 5-3, page 10). The system frame header is

shown in Figure 3-1 (page 5). At the time the invention was made, it would have been obvious

to a person of ordinary skill in the art to use this format of an acknowledgement packet in

acknowledging the received file from the server as disclosed by RFC 783 into system of Hansen.

One of ordinary skill in the art would have been motivated to do this so that the server would

know which packets have been sent successfully and which ones need to be retransmitted.

Regarding claims 8 and 10, Hansen discloses a media access control (MAC) address of

the MC that is 12 characters long in hexadecimal format, or 6 bytes long if represented in binary

(col. 16, line 13-26) and destination also has a MAC address. Hansen fails to disclose a system

frame header that specifies the addresses of the router card and system controller. RFC 783

discloses a system frame header composed of Local Medium and Internet headers (Figure 3-1,

page 5). At the time the invention was made, it would have been obvious to send includes the

addresses in the packet as disclosed RFC 783 into Hansen's system. One of ordinaly skill in the

art would have been motivated to do this so that the packet would be routed to the correction destination NIC and that the receiving NIC was sure that this packet was coming from the server.

Regarding claims 11, 12, 39, 42, 44 and 47, Hansen discloses a media access control (MAC) address of the MC that is 12 characters long in hexadecimal format, or 6 bytes long if represented in binary (col. 16, line 13-26) and destination also has a MAC address. Hansen fails to disclose a system frame header that specifies the addresses of the router card and system controller, a request code, and a file type in the request packet. RFC 783 discloses a system frame header composed of Local Medium and Internet headers (Figure 3-1, page 5). RFC 783 also discloses a request packet format that includes an opcode, which is the request code of the present invention, and a filename, which represents the file type of the present invention (see Figure 5-1, page 8). At the time the invention was made, it would have been obvious to apply addresses frame header, a request code as disclosed by RFC 783 into Hansen's system. One of ordinary skill in the art would have been motivated to do this so that the packet would be routed to the correction destination MC and that the receiving MC was sure that this packet was coming from the server.

Regarding claims 13-15, Hansen discloses power up a network device (Col. 16, lines 13-26).

Response to Arguments

6.   Applicant's arguments filed 3/31/05 have been fully considered but they are not persuasive.

In response to pages 13-16, the applicant states that the limitation "the request packet does not contain an unique identifier for the router card" is inherently disclosed by the specification because the invention does not need to identify the router card when transmits the request packet because it's use the port address of the router card and file type to identify the file which it needs to retrieve.. In reply, the specification is not inherently disclose this limitation because if the request packet includes an unique identifier and port address of the router card and file type, the router card still received the file which it is received because the storage contains plurality of files for using to setup the device. Therefore, the rejection maintains because the specification does not inherently exclude this limitation from the request packet.

7.   In response to applicant's argument of pages 14-16 that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument of pages 14-16 that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.

1992). In this case, Hansen discloses a method and system for generating a request packet that

contains file type and a number unique to a particular device type such Cisco or Compaq router

and module number "it is not an unique identifier for identifying one device of plurality of

devices of a particular device type (such Ethernet having it module number and unique number

for identifying Ethernet type reads on particular device type) and using TFTP for retrieving the

file based on file type request and PCI slot "port address" and RFCE 783 discloses a method and

system for using TFTP for retrieving the file and Bailey discloses a method and system for using

TFTP for transmitting the packets and activated the standby client if the master client fails.

These references use the same protocol to transmit a file between the server and client.

Therefore, it would have been obvious to one of ordinary skill in the art to combine these

teaching into one system. The motivation would have been to prevent error during the

configuration of the network device and reduce the cost of device.
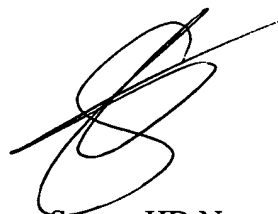

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159.

The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D. Vu can be reached on (571) 272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
6/11/05